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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/528,730
Filing Date: March 22, 2005
Appellant(s): BRASSE ET AL.

Ralph G. Fischer
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 16, 2010 appealing from the Office action mailed August 03, 2010.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is incorrect. A correct statement of the grounds of rejection to be reviewed on appeal is as follows:

Rejection of claims 12, 13, 24, 27-30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCormack et al. (U.S. Pub. No. 2002/0136384) in view of Needham et al. (U.S. Patent No. 6,970,926).

Rejection of claims 14-23, 25, 26 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCormack et al. in view of Needham et al. further in view of Moran (U.S. Patent No. 4,370,743).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

2002/0136384	McCormack et al.	09-2002
6,970,926	Needham et al.	11-2005
4,370,743	Moran	01-1983

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. Claims 12, 13, 24, 27-30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCormack et al. (U.S. Pub. No. 2002/0136384) in view of Needham et al. (U.S. Patent No. 6,970,926).

Regarding claims 12, 29 and 30, with respect to Figures 1-5, McCormack teaches a method for handling digital sound sequences in a telecommunications system having a call

server 52 in Fig.5 [i.e., PBX] comprised of a PC/connected device/ built-in MOH server [i.e., working memory], and a switch device, the method comprising:

storing digital sound sequences on the PC/connected device/ built-in MOH server [i.e., working memory] of the call server 52 in Fig.5 [i.e., PBX] (page 4, paragraph 0076);

McCormack further connecting a plurality of telecommunication terminals to the call server 52 in Fig.5 [i.e., PBX] (fig.2,5);

McCormack further teaches holding a connection request from at least one telecommunication terminal requesting a connection to another communication terminal (page 3, paragraph 0059, page 4, paragraphs 0069-0071, 0076, 0078);

McCormack further teaches the control function/instruction of the call server 52 in Fig.5 [i.e., PBX] accessing the working memory of the control function (page 4, paragraph 0076); and

McCormack further teaches that the switch device of the PBX transmitting the digital sound sequences from the working memory to the at least one telecommunication terminal while the connection request of the at least one telecommunication terminal is being held (page 3, paragraph 0059, page 4, paragraphs 0069-0071, 0076, 0078). (Note; In paragraphs 0076, 0078, McCormack teaches music or video [i.e., digital sound sequences] stored on PC/connected device/ built-in MOH server [i.e., working memory] of the call server 52 in Fig.5 and this call server 52 is in the form of PBX. When a call from one of sets 50 in Fig.5 [i.e., communication terminal] has been placed on hold, the call server 52/PBX is switching the output/ music or video [i.e., digital sound sequences] of the MOH to the one of the sets [i.e., communication terminal] while the connection request of one or more communication terminals is being held.)

McCormack further teaches that the control software/control module running on the server control the operation of the server (page 5, paragraphs 0082,0083). However, McCormack does not specifically teach that the call server comprises a CPU and the CPU 304 is connected to a working memory. Needham teaches that the call server 206 in Fig.3 comprises a CPU and the CPU is connected to a memory 306 [i.e., working memory] (page 4, paragraph 0030). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCormack to incorporate the call server comprising a CPU which is connected to a working memory in McCormack's invention as taught by Needham. The motivation for the modification is to do so in order to provide control the functions of a server/PBX by a single CPU such that the call control function of the server/PBX can be achieved efficiently.

Regarding claim 13, McCormack, as applied to claim 12, teaches that the CPU performs a data transfer of the stored digital sound sequences between the working memory and switching network and the working memory and the switch device for the switch device to transmit the digital sound sequences to the at least one telecommunication terminal while the connection request of the at least one telecommunication terminal is being held, the switch device being comprised of at least one switch or at least one PCM switch (page 1, paragraph 0002, page 3, paragraphs 0059, 0061, page 4, paragraphs 0069-0071, 0073, 0076, 0078).

Regarding claim 24, McCormack, as applied to claim 12, teaches that digitizing sound sequences and storing the digitized sound sequences in the working memory by at least one

component of the telecommunications system (page 3, paragraph 0059, page 4, paragraphs 0069-0071, 0076, 0078).

Regarding claim 27, McCormack, as applied to claim 12, teaches that the digital sound sequences are Music on Hold, voice sequences, or signal tones (page 3, paragraph 0059, page 4, paragraphs 0069-0071, 0076, 0078).

Regarding claim 28, McCormack, as applied to claim 12, teaches program code and/or data of telecommunications subscribers being stored in the working memory (fig.7,8; page 3, paragraph 0059, page 4, paragraphs 0069-0071, 0076, 0078).

1. Claims 14-23, 25, 26 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCormack et al. in view of Needham et al. further in view of Moran (U.S. Patent No. 4,370,743).

Regarding claims 14, 15 and 32, McCormack, as applied to claims 12, 13 and 30, teaches that data is transferred serially in packets between the PBX and the telecommunication terminal being held (fig.5; page 3, paragraphs 0059, 0061-0062, page 4, paragraphs 0069-0071, 0073, 0076, 0078).

However, McCormack in view of Needham does not specifically teach CPU connected to a time slot assigner (TSA) such that the TSA is configured to assign the digital sound sequences

to programmed timeslots. Moran teaches CPU connected to a time slot assigner (TSA) such that the TSA is configured to assign the digital sound sequences to programmed timeslots (col.6, lines 1-22). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCormack in view of Needham to incorporate the feature of a time slot assigner (TSA), connected to CPU, configured to assign the digital sound sequences to programmed timeslots in McCormack's invention in view of Needham's invention as taught by Moran. The motivation for the modification is to do so in order to provide sound within a particular time.

Regarding claims 16 and 17, McCormack, as applied to claims 14 and 15, teaches supporting a packet-by-packet data transfer of the digital sound sequences (page 3, paragraphs 0059, 0061-0062, page 4, paragraphs 0069-0071, 0073, 0076, 0078).

However, McCormack in view of Needham does not specifically teach that the TSA is comprised of a FIFO shift register. Moran teaches that the TSA is comprised of a FIFO shift register (ccol.5, lines 31-51, col.6, lines 1-22, col.8, line 61-col.9, line 18). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCormack in view of Needham to incorporate the feature of the TSA comprising a FIFO shift register in McCormack's invention in view of Needham's invention as taught by Moran. The motivation for the modification is to do so in order to provide a better service to a call.

Regarding claims 18 and 20, McCormack, as applied to claims 12 and 13, teaches the CPU to perform the transfer of the digital sound sequences (page 3, paragraphs 0059, 0061-0062, page 4, paragraphs 0069-0071, 0073, 0076, 0078).

However, McCormack in view of Needham does not specifically teach a microcontroller connected to the CPU such that the microcontroller is initialized by the CPU to perform a transfer. Moran teaches a microcontroller connected to the CPU such that the microcontroller is initialized by the CPU to perform a transfer (fig.1; col.5, lines 18-30). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCormack to incorporate the feature of a microcontroller connected to the CPU such that the microcontroller is initialized by the CPU to perform a transfer in McCormack's invention in view of Needham's invention as taught by Moran. The motivation for the modification is to do so in order to provide fast processing service by a CPU.

Regarding claim 19, McCormack in view of Needham further in view of Moran, as applied to claim 18, does not specifically teach that the microcontroller is a Direct Memory Access (DMA) controller. Examiner notes that the microcontroller as a Direct Memory Access (DMA) controller is well known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCormack in view of Needham further in view of Moran to incorporate the feature of the microcontroller as a Direct Memory Access (DMA) controller in McCormack's invention in view of Needham's invention further in view of Moran's invention in order to provide quick data retrieval control from a memory.

Regarding claim 21, McCormack, as applied to claim 21, teaches that the control function requests the microcontroller to set the start address of the digital sound sequences in the working memory in order to play back the digital sound sequences (page 3, paragraphs 0059, 0061-0062, page 4, paragraphs 0069-0071, 0073, 0076, 0078).

However, McCormack in view of Needham does not specifically teach that the CPU requests the microcontroller to set the start address of the digital sound sequences in the working memory and to set the destination address in the FIFO shift register of the TSA. Moran teaches that the CPU requests the microcontroller to set the start address of the digital sound sequences in the working memory and to set the destination address in the FIFO shift register of the TSA (fig.1; col.5, lines 31-68). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCormack in view of Needham to incorporate the feature of the CPU requesting the microcontroller to set the start address of the digital sound sequences in the working memory and to set the destination address in the FIFO shift register of the TSA in McCormack's invention in view of Needham's invention as taught by Moran. The motivation for the modification is to do so in order to properly play back sound/audio message to a user.

Claims 22, 23 and 33 are rejected for the same reasons as discussed above with respect to claims 14, 16 and 21. Furthermore, McCormack, as applied to claims 18 and 21, teaches the CPU requests to set the destination address in the working memory for recording sound sequences (page 3, paragraphs 0059, 0061-0062, page 4, paragraphs 0069-0071, 0073, 0076, 0078).

Regarding claim 25, McCormack, as applied to claim 12, in view of Needham does not specifically teach that at a predefined filling level of the FIFO shift register, the TSA is configured to transmit an interrupt command the CPU to start or to stop a new data transfer. Moran teaches that at a predefined filling level of the FIFO shift register, the TSA is configured to transmit an interrupt command the CPU to start or to stop a new data transfer (fig.1; col.5, lines 31-68). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCormack in view of Needham to incorporate the feature of the time slot assigner (TSA) commanding the CPU by an interrupt command to start or to stop a new data transfer at a predefined filling level of the FIFO shift register in McCormack's invention in view of Needham's invention as taught by Moran. The motivation for the modification is to do so in order to stop recording data in memory when the memory is full.

Claim 31 is rejected for the same reasons as discussed above with respect to claims 14 and 16.

(10) Response to Argument

Claims 12-13, 24 and 27-30

Ia: On pages 10 and 16 of the Appeal Brief, the Appellant contends that McCormack et al. do not teach, show or otherwise disclose a PBX that includes digital sound sequences stored

on working memory of the PBX's CPU or a switch device configured to transmit the digital sound sequences stored on the working memory of a PBX's CPU while the connection request of one or more communication terminals is being held. Examiner respectfully disagrees with this argument. The reasons are already discussed in the rejection of the claim in view of **McCormack** in the ground(s) of rejection section of this office action.

Ib: On page 10 of the Appeal Brief, the Appellant contends that neither McCormack et al. or Needham show or suggest any arrangement of a PBX that includes a CPU of the PBX accessing the working memory of the CPU for transmission of sound signals to a communication terminal while that communication terminal is being held. Nor does McCormack et al. show or teach a switch device of the PBX transmitting the digital sound sequences from the working memory of a PBX's CPU to any telecommunication terminals while the connection request of those one or more telecommunication terminals are being held. Examiner respectfully disagrees with this argument. In paragraphs 0076, 0078, McCormack teaches music or video [i.e., digital sound sequences] stored on PC/connected device/ built-in MOH server [i.e., working memory] of the call server 52 in Fig.5 and this call server 52 is in the form of PBX. When a call from one of sets 50 in Fig.5 [i.e., communication terminal] has been placed on hold, the call server 52/PBX is switching the output/ music or video [i.e., digital sound sequences] of the MOH to the one of the sets [i.e., communication terminal] while the connection request of one or more communication terminals is being held. Whereas, in page 4, paragraph 0030, Needham teaches that the call server 206 in Fig.3 comprises a CPU and the CPU is connected to a memory 306 [i.e., working memory]. It clearly means that in order to play/output the sound sequences to the

communication terminal, a control system of the call server 52/PBX must access the working memory of the control system for transmission of the sound sequences while that communication terminal is being held. Needham teaches that the control system of the call server is a CPU of the call server.

Furthermore, it is also clear from the teachings of McCormack et al. and Needham that in order to play/output the sound sequences to the communication terminal, a CPU of the call server 52/PBX must access the working memory of the CPU for transmission of the sound sequences while that communication terminal is being held.

Ic: On page 10 of the Appeal Brief, the Appellant contends that McCormack et al. do not teach the MOH server and a PBX server being located in separate locations or in separate housings. This argument is not relevant. It is because, the Appellant does not claim whether the MOH server and a PBX server being located in separate locations or in separate housings.

Thus the rejection of the claim in view of **McCormack** in view of **Needham** remain. The rejection of the claims 29 and 30 will remain for the same reasons as discussed above with respect to claim 12.

Claims 14-23, 25-26 and 31-33

II: On pages 13-14 of the Appeal Brief, the Appellant contends that the combination of **McCormack** et al., **Needham** et al. and **Mora**n do not teach or suggest the limitations of the pending claims 14-23, 25-26 and 31-33. It is because neither **McCormack** et al., **Needham** et al. nor **Moran** teach, suggest or otherwise disclose a PBX that includes digital sound sequences stored on working memory of the PBX's CPU or a switch device configured to transmit the digital sound sequences stored on the working memory of a PBX's CPU while the connection request of one or more communication terminals is being held. Examiner respectfully disagrees with this argument. The reasons are already discussed in the rejection of the claim in view of **McCormack** and **Needham** in the section **I** of this office action. It is noted that the Appellant contends regarding claims 1-25 and 27-33 instead of the pending claims 14-23, 25-26 and 31-33.

Claims 14-17 and 31-32

IIa: On pages 14-15 of the Appeal Brief, the Appellant contends that **Moran** does not teach a TSA or a FIFO as required by pending claims 14-17 and 31-32. Examiner respectfully disagrees with this argument. In col.6, lines 1-22, **Moran** teaches CPU connected to a time slot assigner (TSA) such that the TSA is configured to assign the digital sound sequences to programmed timeslots. It clearly means that **Moran** does teach a TSA or a FIFO.

Claim 23 and 33

IIb: On pages 15-16 of the Appeal Brief, the Appellant contends that **Moran** does not teach or suggest any recording of any sound sequences nor the setting of a start address in a FIFO shift register by a microcontroller of a PBX to record sound sequences. Examiner respectfully disagrees with this argument. It is because, examiner did not depend upon **Moran** to teach any recording of any sound sequences. Examiner depends upon **Moran** for the teaching of the setting of a start address in a FIFO shift register by a microcontroller of a PBX. In col.5, lines 31-68, **Moran** teaches that the CPU requests the microcontroller to set the start address of the digital sound sequences in the working memory and to set the destination address in the FIFO shift register of the TSA.

Thus the rejection of the claims in view of **McCormack, Needham** and **Moran** is maintained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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March 14, 2011

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